

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003358**Date Inspected:** 16-Jul-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yanhua**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Roscoe Dixon was present at the time requested to randomly observe welding and associated operations being performed for the Orthotropic Box Girders (OBG).

**Bay 3 – Heavy Duty Machinery Shop**

The QA Inspector observed ZPMC qualified welder Dong Hu Yong Cang ID 203805 utilizing WPS-345-FCAW-2G (2F) Repair to perform Flux Core Arc Welding (FCAW) repairs of deck panel Partial Joint Penetration (PJP) welds on DP051-001.

The QA Inspector Dixon was informed by ZPMC QC Inspector Mr. Fu Yuhong that ZPMC CWI Inspector Chen Xi and ABF personnel Kevin Chen, and Ding Baohua were about to perform a final three party visual repair inspection on deck panels DP073-001, and DP079-001. Mr. Fu Then requested that a Caltrans QA Inspector also performed a visual inspection on the deck panels.

After an agreement was reached by all parties on the repairs which had been completed on the deck panels the QA Inspector assigned Caltrans lot number B59 and the inspection date in the space listed as (FVT) on the yellow tag which is pasted to the outside U-Ribs of the deck panels. The ABF and ZPMC personnel also signed and dated the tag indicating the inspection had been completed.

This QA inspector observed ZPMC in the process of excavating seven repair areas on deck panel DP077-001 which ZPMC had performed ultrasonic testing (UT) and found indications which require lack of penetration

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repair (LOP).

The reject reports for (LOP) were listed by ZPMC as B787UT-913 and the repair reports were listed as BWR560 thru BWR563 weld numbers one thru four, and three repairs on weld number eight each listed as BWR564.

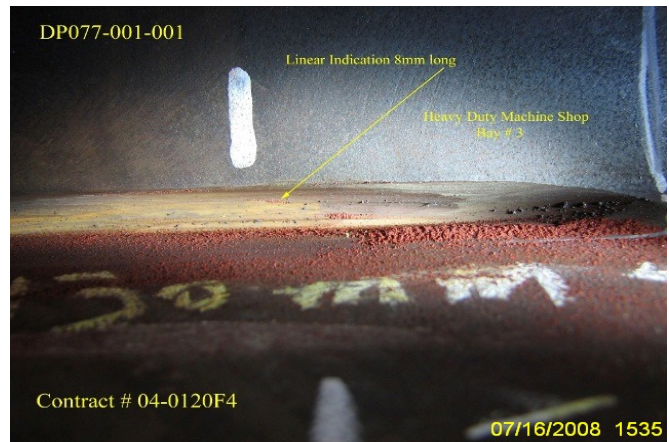
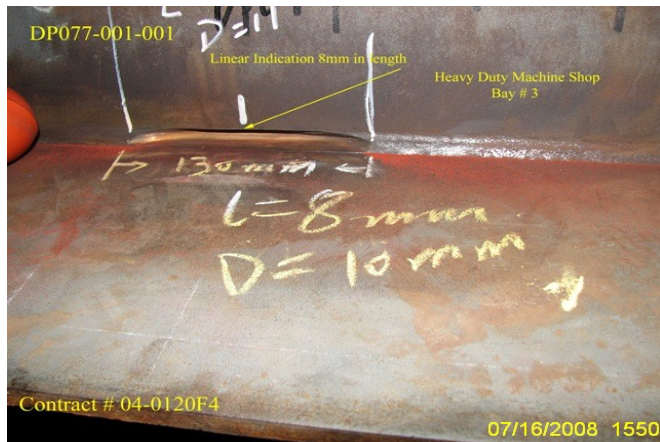
During the inspection of the excavated areas by the QA Inspector the ABF Inspector Kevin Chen informed the QA Inspector that the deck panel identified by ZPMC as DP077-001 weld # 1 had been excavated to a depth which exceeded the 9.9mm maximum depth per internal weld repair procedure for (LOP) which had been submitted by ZPMC for approval.

The following personnel arrived at the welding station and discussed how to proceed with the repair: Caltrans Swing Shift QA Leads Kenneth Riley, Albert Carreon, and ABF QC Manager (QCM) Steve Lawton.

Mr Carreon called the SMR Ady Velasco and informed him ZPMC wanted to proceed with the repair using the (LOP) repair procedure and Mr. Velasco allowed ZPMC to repair the area with Caltrans QA Inspector monitoring the weld repair. The ZPMC QC inspector and ABF QC Inspectors also monitored the weld repair.

The weld repair generally appeared to comply with the weld procedure specification (WPS) WPS-345 FCAW-2G (2F)-repair 1 which was submitted by ZPMC as the LOP repair procedure. The Submittal number is 634R2 Internal Weld Repair Demonstration dated June 11, 2008.

For more detail see photographs shown below:



## Summary of Conversations:

As noted within the report shown above.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco, (818) 292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:** Dixon,Roscoe

Quality Assurance Inspector

**Reviewed By:** Lanz,Joe

QA Reviewer